



Massachusetts Department of Environmental Protection Source Water Assessment and Protection (SWAP) Report For Twin Coach Mobile Home Estates

What is SWAP?

The Source Water Assessment and Protection (SWAP) program, established under the federal Safe Drinking Water Act, requires every state to:

- ? Inventory land uses within the recharge areas of all public water supply sources;
- ? Assess the susceptibility of drinking water sources to contamination from these land uses; and
- ? Publicize the results to provide support for improved protection.

SWAP and Water Quality

Susceptibility of a drinking water source does *not* imply poor water quality. Actual water quality is best reflected by the results of regular water tests.

Water suppliers protect drinking water by monitoring for more than 100 chemicals, treating water supplies, and using source protection measures to ensure that safe water is delivered to the tap.

Prepared by the
Massachusetts Department of
Environmental Protection,
Bureau of Resource Protection,
Drinking Water Program

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Table 1: Public Water System (PWS) Information

PWS NAME	Twin Coach Mobile Home Estates
PWS Address	Haskell Circle
City/Town	Lakeville, Massachusetts 02347
PWS ID Number	4146045
Local Contact	Wayne Williams
Phone Number	(508) 947-4527

Well Name	Source ID#	Zone I (in feet)	IWPA (in feet)	Source Susceptibility
Well #1	01G	270	700	Moderate
Well #2	02G	270	700	Moderate

Introduction

We are all concerned about the quality of the water we drink. Drinking water wells may be threatened by many potential sources of contamination, including septic systems, road salting, and improper disposal of hazardous materials. Citizens and local officials can work together to better protect these drinking water sources.

Purpose of this report:

This report is a planning tool to support local and state efforts to improve water supply protection. By identifying land uses within water supply protection areas that may be potential sources of contamination the assessment helps focus protection efforts on appropriate best management practices (BMPs) and drinking water source protection measures. Department of Environmental Protection (DEP) staff are available to provide information about funding and other resources that may be available to your community.

This report includes:

1. Description of the Water System
2. Discussion of Land Uses within Protection Areas
3. Recommendations for Protection
4. Attachments, including a Map of the Protection Areas

1. Description of the Water System

Twin Coach Mobile Home Estates draws its drinking water from two groundwater wells located in an open area just to the east of the facility. The wells both have Zone I radii of 270 feet and Interim Wellhead Protection Area (IWPA) radii of 700 feet. The IWPA provides an interim protection area for a water supply well when the actual recharge area has not been delineated. The actual recharge area to the well may be significantly larger or smaller than the IWPA. The wells are located in an aquifer with a high vulnerability to contamination due to the absence of hydrogeologic barriers that can prevent contaminant migration. Please refer to the attached map of the well locations with Zone I and IWPA radii.

The wells serving Twin Coach Mobile Home Estates have no treatment at this time. The DEP requires public water suppliers to monitor the quality of the water. For current

What is a Protection Area?

A well's water supply protection area is the land around the well where protection activities should be focused. Each well has a Zone I protective radius and an Interim Wellhead Protection Area (IWPA).

- **The Zone I** is the area that should be owned or controlled by the water supplier and limited to water supply activities.
- **The IWPA** is the larger area that is likely to contribute water to the well.

In many instances the IWPA does not include the entire land area that could contribute water to the well. Therefore, the well may be susceptible to contamination from activities outside of the IWPA that are not identified in this report.

What is Susceptibility?

Susceptibility is a measure of a well's potential to become contaminated due to land uses and activities within the Zone I and Interim Wellhead Protection Area (IWPA).

information on monitoring results and treatment, please contact the Public Water System contact person listed above in Table 1 for a copy of the most recent Consumer Confidence Report. Drinking water monitoring reporting data are also available on the web via EPA's Envirofacts website at:

http://www.epa.gov/enviro/html/sdwis/sdwis_query.html.

2. Discussion of Land Uses in the Protection Areas

There are a number of land uses and activities within the drinking water supply protection areas that are potential sources of contamination.

Key issues include:

1. **Zone Is;**
2. **above ground storage tank (AST) with heating oil;**
3. **septic systems;**
4. **lawn care; and**
5. **highway.**

The overall ranking of susceptibility to contamination for the wells is moderate, based on the presence of moderate ranked threats within the IWPA.

1. **Zone Is** – Currently, the wells meet DEP's Zone I regulations, which allow only water supply related activities in the Zone I and require that the land within the Zone I be owned or controlled by the public water system. The Twin Coach Mobile Home Estates' Zone I contains only open space and is owned by the public water supplier. Please note that systems not meeting DEP Zone I requirements must get DEP approval and address Zone I issues prior to increasing water use or modifying systems.

Recommendations:

- ✓ Restrict access to Zone I by gating and locking the area.
 - ✓ Do not allow any new non-water supply activities to move into Zone I.
 - ✓ Post the area with "Public Drinking Water Supply Recharge Area" signs.
 - ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.
2. **Aboveground Storage Tanks (AST)** – It is assumed that the five private residences on the eastern edge of the IWPA utilize above ground storage tanks for fuel oil to

Table 2: Table of Activities within the Water Supply Protection Areas

Potential Contaminant Sources	Zone I	IWPA	Threat	Potential Concern
Above ground storage tanks	No	Yes	Moderate	leaks, spills
Septic systems	No	Yes	Moderate	bacteria, improper disposal of hazardous materials
Lawn care	No	Yes	Moderate	fertilizer and pesticide use
Highway/roads	No	Yes	Moderate	stormwater runoff, spills

* For more information on Contaminants of Concern associated with individual facility types and land uses please see the SWAP Draft Land Use / Associated Contaminants Matrix on DEP's website - www.state.ma.us/dep/brp/dws/.

Glossary

Zone I: The area closest to a well; a 100 to 400 foot radius proportional to the well's pumping rate. To determine your Zone I radius, refer to the attached map.

IWPA: A 400 foot to ½ mile radius around a public water supply well proportional to its pumping rate; the area DEP recommends for protection in the absence of a defined Zone I. To determine IWPA radius, refer to the attached map.

Zone II: The primary recharge area defined by a hydrogeologic study.

Aquifer: An underground water-bearing layer of permeable material that will yield water in a usable quantity to a well.

Hydrogeologic Barrier: An underground layer of impermeable material that resists penetration by water.

Recharge Area: The surface area that contributes water to a well.

heat their homes. Residents in Twin Coach Mobile Home Estates heat with either gas or electricity. If managed improperly, above ground storage tanks can be a potential source contamination due to leaks or spills of the chemicals they store.

Recommendation:

- ✓ Inform the residents of the proximity of your wells to their property.
- ✓ Educate residents on proper best management practices for heating fuel oil tanks.

3. Septic Systems – The twenty units and five residences within the IWPA use septic systems for wastewater disposal. Improper disposal of hazardous materials or improper operation and maintenance of septic systems can lead to groundwater contamination.

Recommendation:

- ✓ Educate residents on proper operation and maintenance of septic systems.
- ✓ Ensure residents are notified of local household hazardous waste disposal opportunities.

4. Lawn Care – There are small areas of landscaping for the residences in the IWPA. Improper use and disposal of fertilizers and pesticides can contaminate groundwater.

Recommendation:

- ✓ Educate residents on proper lawn care, including proper use and disposal of fertilizers and pesticides.

5. Highway – Route 495 runs through the edge of the IWPA. Runoff and spills from roads can contaminate public wells, especially if a storm drain discharges into your protection area.

Recommendation:

- ✓ Investigate drainage patterns from the highway to see if storm drainage discharges into the IWPA.
- ✓ Educate Fire Department about well location and request notification of any spills.

Implementing the following recommendations will reduce the system's susceptibility to contamination.

3. Protection Recommendations

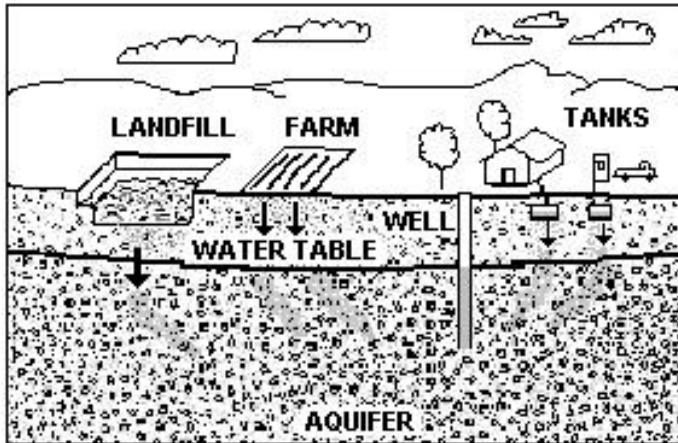


Figure 1: Example of how a well could become contaminated by different land uses and activities.

Implementing protection measures and best management practices (BMPs) will reduce the wells' susceptibility to contamination. The Twin Coach Mobile Home Estates is commended for meeting DEP's Zone I requirements. Twin Coach Mobile Home Estates' officials should review and adopt the key recommendations above and the following:

Priority Recommendations:

Zone I:

- ✓ Keep additional non-water supply activities out of the Zone I.
- ✓ Post water supply protections signs in the Zone I and IWPA.
- ✓ Limit public access to the wells and Zone I by locking facilities.
- ✓ Continue to conduct regular inspections of the Zone I. Look for illegal dumping or evidence of vandalism.
- ✓ Use Best Management Practices (BMPs) and restrict activities that could pose a threat to the water supply.

For More Information:

in improving Contact Isabel Collins in DEP's Lakeville Office at (508) 946-2726 for more information and for assistance current protection measures.

More information relating to drinking water and source protection is available on the Drinking Water Program web site at:

www.state.ma.us/dep/brp/dws/

Additional Documents:

To help with source protection efforts, more information is available by request or online at www.state.ma.us/dep/brp/dws/ including:

1. Water Supply Protection Guidance Materials such as model regulations, Best Management Practice information, and general water supply protection information.
2. MA DEP SWAP Strategy
3. Land Use Pollution Potential Matrix
4. Draft Land/Associated Contaminants Matrix

Copies of this assessment have been made available to the public water supplier and town boards.

- ✓ Keep road drainage away from the well.
- ✓ Do not use or store pesticides, fertilizers or road salt within the Zone I.

Training and Education:

- ✓ Train residents on proper hazardous material use, disposal, emergency response, and best management practices.
- ✓ Post drinking water protection area signs at key visibility locations.
- ✓ Educate residents on septic system operation and maintainance.

Planning:

- ✓ Work with local officials in town to include the facility's IWPA in an Aquifer Protection District Bylaw and to assist you in improving protection.
- ✓ Supplement the SWAP assessment with additional local information and incorporate it into water supply educational efforts. Use a land use inventory to assist in setting priorities, focusing inspections, and creating educational activities.

Funding:

The Department's Wellhead Protection Grant Program provides funds to assist public water suppliers in addressing wellhead protection through local projects. Protection recommendations discussed in this document may be eligible for funding under that program. For additional information, please refer to DEP's web site. Other funding opportunities are described in *Grant and Loan Programs: Opportunities for Watershed Protection, Planning and Implementation* at <http://www.state.ma.us/dep/brp/mf/files/glprgm.pdf>.

Citizens and community officials should use this SWAP report to spur discussion of local drinking water protection measures.

6. Attachments

- Map of the Public Water Supply (PWS) Protection Area.
- Your Septic System brochure
- Source Protection Sign Order Form
- Residents Protect Drinking Water fact sheet